

AMENDMENTS TO THE CLAIMS:

The below listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

24. (Currently amended) A flexible stent for implantation in a body lumen and expandable from a contracted condition to an expanded condition, comprising:

a plurality of adjacent cylindrical elements which are expandable in the radial direction and arranged in alignment along a longitudinal stent axis;

the cylindrical elements formed in a serpentine wave pattern transverse to the longitudinal axis and containing a plurality of alternating peaks and valleys;

at least one interconnecting member extending between adjacent cylindrical elements and connecting them to one another;

at least one reinforcing member extending across a width of the alternating peaks and valleys, the reinforcing member curved opposite to the respective peaks and valleys[[,]] such that the reinforcing member has a circumferential width when the stent is in the contracted condition;

each reinforcing member lying in the same circumferential plane as the cylindrical elements and having a configuration that is essentially parallel to the longitudinal axis when the stent is in the contracted condition ~~and configured to limit the radial expansion of the cylindrical elements;~~ and

the serpentine pattern ~~containing~~ having varying degrees of curvature in regions of the peaks and valleys adapted so that radial expansion of the adjacent cylindrical elements is substantially uniform around ~~their~~ a circumferences of the cylindrical elements during expansion of the stent from the contracted condition to the expanded condition[[.]];

wherein the circumferential width of each reinforcing member is smaller than the width of the peak or valley it extends across.

25. (Currently amended) A flexible stent for implantation in a body lumen and expandable from a contracted condition to an expanded condition, comprising:

a plurality of adjacent cylindrical elements which are expandable in the radial direction and arranged in alignment along a longitudinal stent axis;

the cylindrical elements formed in a serpentine wave pattern transverse to the longitudinal axis and containing a plurality of alternating peaks and valleys;

at least one interconnecting member extending between adjacent cylindrical elements and connecting them to one another, the interconnecting member having essentially parallel to the longitudinal stent axis when the stent is in the contracted condition;

~~at least one reinforcing members extending across a width of the alternating peaks and valleys;~~ at least one peak or one valley in each of the plurality of cylindrical elements; the reinforcing members lying in the same circumferential plane as the cylindrical elements and having a configuration that is essentially parallel to the longitudinal stent axis when the stent is in the contracted condition ~~and configured to limit the radial expansion of the cylindrical elements;~~ and

the serpentine pattern ~~containing~~ having varying degrees of curvature in regions of the peaks and valleys adapted so that radial expansion of the adjacent cylindrical elements is substantially uniform around ~~their~~ a circumferences of the cylindrical elements during expansion of the stent from the contracted condition to the expanded condition;

wherein the stent is coated with a biocompatible coating.

26. (New) A flexible stent for implantation in a body lumen and expandable from a contracted condition to an expanded condition, comprising:

a plurality of adjacent cylindrical elements which are expandable in the radial direction and arranged in alignment along a longitudinal stent axis;

the cylindrical elements formed in a serpentine wave pattern transverse to the longitudinal axis and containing a plurality of alternating peaks and valleys;

at least one interconnecting member extending between adjacent cylindrical elements and connecting them to one another;

at least one reinforcing member extending across a width of the alternating peaks and valleys such that the reinforcing member is curved and has a circumferential width when the stent is in the contracted condition;

each reinforcing member lying in the same circumferential plane as the cylindrical elements and having a configuration essentially parallel to the longitudinal stent axis when the stent is in the contracted condition; and

the serpentine pattern having varying degrees of curvature in regions of the peaks and valleys adapted so that radial expansion of the adjacent cylindrical elements is substantially uniform around a circumference of the cylindrical elements during expansion of the stent from the contracted condition to the expanded condition;

wherein the circumferential width of each reinforcing member is smaller than the width of the peak or valley it extends across.

27. (New) The stent of claim 26, wherein each of the alternating peaks and valleys has one of said reinforcing members extending across its width.

28. (New) The stent of claim 26, wherein the interconnecting member connects a reinforcing member of a valley of one cylindrical element with a valley of an adjacent cylindrical element.

29. (New) The stent of claim 26, wherein the reinforcing member is curved opposite to the respective peaks and valleys.

30. (New) The stent of claim 26, wherein the reinforcing member is comprised of a first quarter turn that transitions into a half turn, which transitions into a second quarter turn.

31. (New) The stent of claim 26, wherein an intersection of the reinforcing member and the peaks and valleys is rounded.

32. (New) The stent of claim 26, wherein the stent is formed of a biocompatible material selected from the group consisting of stainless steel, tungsten, tantalum, super-elastic NiTi alloys, and thermoplastic polymers.

33. (New) The stent of claim 26, wherein the stent is formed from a single piece of tubing.

34. (New) The stent of claim 26, wherein the stent is coated with a biocompatible coating.

35. (New) A longitudinally flexible stent for implanting in a body lumen and expandable from a contracted condition to an expanded condition, comprising:

a plurality of adjacent cylindrical elements which are independently expandable in the radial direction and arranged in alignment along a longitudinal stent axis;

the cylindrical elements formed in a serpentine wave pattern transverse to the longitudinal axis and containing a plurality of alternating peaks and valleys;

at least one interconnecting member extending between adjacent cylindrical elements and connecting them to one another;

reinforcing members extending across only one peak and one valley in each of the plurality of cylindrical elements, the reinforcing members curved such that they have a circumferential width when the stent is in the contracted condition;

each reinforcing member lying in the same circumferential plane as the cylindrical elements and having a configuration essentially parallel to the longitudinal axis when the stent is in the contracted condition; and

the serpentine wave pattern configured in size and shape so that the cylindrical elements generally expand in a uniform manner around a circumference of the cylindrical elements during expansion of the stent from the contracted condition to the expanded condition;

wherein the circumferential width of each reinforcing member is smaller than the width of the peak or valley it extends across.

36. (New) The stent of claim 35, wherein within a single cylindrical element, the serpentine wave pattern includes a sequence containing a first peak, a first valley, a second peak, a second valley, a third valley, and a third peak.

37. (New) The stent of claim 35, wherein the stent is formed of a biocompatible material selected from the group consisting of stainless steel, tungsten, tantalum, super-elastic NiTi alloys, and thermoplastic polymers.

38. (New) A flexible stent for implantation in a body lumen and expandable from a contracted condition to an expanded condition, comprising:

- a plurality of adjacent cylindrical elements which are expandable in the radial direction and arranged in alignment along a longitudinal stent axis;

- the cylindrical elements formed in a serpentine wave pattern transverse to the longitudinal axis and containing a plurality of alternating peaks and valleys;

- at least one interconnecting member extending between adjacent cylindrical elements and connecting them to one another, the interconnecting member being essentially parallel to the longitudinal stent axis when the stent is in the contracted condition;

- reinforcing members extending across a width of at least one peak or one valley in each of the plurality of cylindrical elements, the reinforcing members curved such that they have a circumferential width when the stent is in the contracted condition;

- the reinforcing members lying in the same circumferential plane as the cylindrical elements and having a configuration essentially parallel to the longitudinal stent axis when the stent is in the contracted condition and essentially transverse to the longitudinal stent axis when the stent is in the expanded condition;

the reinforcing members configured to limit the radial expansion of the cylindrical elements such that the serpentine wave pattern of the cylindrical elements is maintained upon expansion of the stent; and

the serpentine pattern having varying degrees of curvature in regions of the peaks and valleys adapted so that radial expansion of the adjacent cylindrical elements is substantially uniform around a circumference of the cylindrical elements during expansion of the stent from the contracted condition to the expanded condition;

wherein the circumferential width of each reinforcing member is smaller than the width of the peak or valley it extends across.